



Attorney Docket No.: 4216.260-US

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Royer *et al.*

Confirmation No. 3928

Serial No.: 09/461,537

Group Art Unit: 1636

Filed: December 15, 1999

Examiner: Marvich, M.

For: Non-Toxic, Non-Toxigenic, Non-Pathogenic Fusarium Expression System and Promoters and Terminators for Use Therein

VERIFIED STATEMENT

Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants submit a computer readable form of a sequence listing. The content of the paper copy and computer readable form is the same..

I also state that the listing does not include matter which goes beyond the disclosure in the Application as filed.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issue thereon.

Respectfully submitted,

Date: October 27, 2004

Robert L. Starnes, Reg. No.: 41,324
Novozymes Biotech, Inc.
1445 Drew Avenue
Davis, CA 95616
(530) 757-8100



SEQUENCE LISTING

<110> Novozymes Biotech
Royer, John C
Moyer, Donna L
Yoder, Wendy T
Shuster, Jeffrey R

<120> Non-Toxic, Non-Pathogenic, Non-Pathogenic Fusarium Expression System

<130> 4216.260-US

<140> 09/461,537
<141> 1999-12-15

<150> 08/816,915
<151> 1997-03-13

<150> 08/726,105
<151> 1996-10-04

<150> 08/404,678
<151> 1995-03-15

<150> 08/269,449
<151> 1994-06-30

<160> 16

<170> PatentIn version 3.2

<210> 1
<211> 30
<212> DNA
<213> Fusarium oxysporum

<400> 1
tgcggtatcca tggtaagtt cgcttcggtc 30

<210> 2
<211> 30
<212> DNA
<213> Fusarium oxysporum

<400> 2
gacctcgagt taagcatagg tgtcaatgaa 30

<210> 3
<211> 998
<212> DNA
<213> Fusarium oxysporum

<400> 3

atcatcaacc actcttcact cttcaactct cctctcttgg atatctatct cttcaccatg	60
gtcaagttcg cttccgtcgt tgcacttggt gctcccttgg ctgctgccgc tcctcaggag	120
atccccaaca ttgttggtgg cacttctgcc agcgctggcg actttccctt catcgtgagc	180
attagccgca acggtggccc ctggtgtgga ggttctctcc tcaacgccaa caccgtcttg	240
actgctgccc actgcgtttc cggatacgct cagagcgggt tccagattcg tgctggcagt	300
ctgtctcgca cttctgggtg tattacctcc tcgctttcct ccgtcagagt tcacctagc	360
tacagcggaa acaacaacga tcttgcattt ctgaagctct ctacttccat cccctccggc	420
ggaaacatcg gctatgctcg cctgggtgct tccggtctg accctgtcgc tggatcttct	480
gccactggtg ctggctgggg cgctacctct gagggcggca gctctactcc cgtcaacctt	540
ctgaagggtta ctgtccctat cgtctctcgt gctacctgcc gagctcagta cggcacctcc	600
gccatcacca accagatggt ctgtgctggt gtttcttccg gtggcaagga ctcttgccag	660
ggtgacagcg gcggcccat cgctgacagc tccaacactc ttatcggtgc tgtctcttgg	720
ggtaacggat gtgcccgacc caactactct ggtgtctatg ccagcgttgg tgctctccgc	780
tctttcattg acacctatgc ttaaatacct tgttggaagc gtcgagatgt tccttgaata	840
ttctctagct tgagtcttgg atacgaaacc tgtttgagaa ataggtttca acgagttaag	900
aagatatgag ttgatttcag ttggatctta gtcttggtg ctcgtaatag agcaatctag	960
atagcccaaa ttgaatatga aatttgatga aaatatcc	998

<210> 4
 <211> 248
 <212> PRT
 <213> Fusarium oxysporum

<220>
 <221> PROPEP
 <222> (1)..(24)

<220>
 <221> mat_peptide
 <222> (25)..(248)

<400> 4

Met Val Lys Phe Ala Ser Val Val Ala Leu Val Ala Pro Leu Ala Ala	
-20 -15 -10	

Ala Ala Pro Gln Glu Ile Pro Asn Ile Val Gly Gly Thr Ser Ala Ser
-2-

-5

-1 1

5

Ala Gly Asp Phe Pro Phe Ile Val Ser Ile Ser Arg Asn Gly Gly Pro
10 15 20

Trp Cys Gly Gly Ser Leu Leu Asn Ala Asn Thr Val Leu Thr Ala Ala
25 30 35 40

His Cys Val Ser Gly Tyr Ala Gln Ser Gly Phe Gln Ile Arg Ala Gly
45 50 55

Ser Leu Ser Arg Thr Ser Gly Gly Ile Thr Ser Ser Leu Ser Ser Val
60 65 70

Arg Val His Pro Ser Tyr Ser Gly Asn Asn Asn Asp Leu Ala Ile Leu
75 80 85

Lys Leu Ser Thr Ser Ile Pro Ser Gly Gly Asn Ile Gly Tyr Ala Arg
90 95 100

Leu Ala Ala Ser Gly Ser Asp Pro Val Ala Gly Ser Ser Ala Thr Val
105 110 115 120

Ala Gly Trp Gly Ala Thr Ser Glu Gly Gly Ser Ser Thr Pro Val Asn
125 130 135

Leu Leu Lys Val Thr Val Pro Ile Val Ser Arg Ala Thr Cys Arg Ala
140 145 150

Gln Tyr Gly Thr Ser Ala Ile Thr Asn Gln Met Phe Cys Ala Gly Val
155 160 165

Ser Ser Gly Gly Lys Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Ile
170 175 180

Val Asp Ser Ser Asn Thr Leu Ile Gly Ala Val Ser Trp Gly Asn Gly
185 190 195 200

Cys Ala Arg Pro Asn Tyr Ser Gly Val Tyr Ala Ser Val Gly Ala Leu
205 210 215

Arg Ser Phe Ile Asp Thr Tyr Ala

<210> 5
 <211> 1206
 <212> DNA
 <213> *Fusarium oxysporum*

<400> 5
 gaattcttac aaaccttcaa cagtggagac ttccgacacg acatategat cctttgaaga 60
 tacggtgagc gtcagatcat gaatttcata catcttcacg tccttcctct ttcaaactat 120
 gcaaagtcct tctagtacct cccaaaactt gatttacgcg ctctccaatc aaaagtagct 180
 tccaaaagtg atctacctca gctctagatc agggcaecta ttcgcaaaga tctacaagct 240
 gaactagtaa gcatagcggg agaatatccc acatcattcg agaaggcctt cgtattagac 300
 ctagtgggat cgacagaaaa gataagacgg agatagatgc tatgtttgga aggtaggggg 360
 tggaatagga tgcaacaggt attggcataa gcgatgcaat aggtgcatct agaaactagg 420
 tgacagactg gccacagagg tgtatcctat gcaggctgat gcgtgcgta tcgcagggct 480
 gctattgcgt ggtgggtggc acaaaagttc tatgtgggtt ccagtttcag aatattgggc 540
 cattgtgatt gatggcgcat gaccgaatta tagcagtga ccccgccag agtagtagtg 600
 cagatgcgct ttgatgcttg gcgattcctc gggctaaata actccggttg gtctgtagaa 660
 tgctgacgcg atgaccttc ggcattaatc gtagatcttg gggggggata agccgatcaa 720
 agacacactg tagatcagct cttegatgac tcttaccagc ttataataa cattcatctt 780
 gaacgtcttt ttcgtccagt gtttaccttt cgtcctatct atccgtcata tccacagtgt 840
 tattggcgat agagtatcg actttcctca tcgggatact ggcccttgct gccaggggcc 900
 ttatatgcg atcactttca cgggagcatg ataagggtta tgcttcttct gaatgccgaa 960
 ctagactacg gaacaacgga gcttagtacc agaaaggcag gtacgcctat tcgcaaactc 1020
 cgaagataca accaagcaag cttatcgcg gatagtaacc agagaggcag gtaagaagac 1080
 acaacaacat ccatagctat gtagattctc gaatataaaa ggaccaagat ggactattcg 1140
 aagtagtcta tcatcaacca ctcttcactc ttcaactctc ctctcttgga tatctatctc 1200
 ttcacc 1206

<210> 6
 <211> 2148
 <212> DNA
 <213> *Fusarium oxysporum*

<400> 6

gaattctttac aaaccttcaa cagtggagac ttccgacacg acatatcgat cctttgaaga	60
tacggtgagc gtcagatcat gaatttcata catcctcacg tccttcctct ttcaaactat	120
gcaaagtccct tctagtacct cccaaaactt gattttacgcg ctctccaatc aaaagtacct	180
tccaaaagtg atctacctca gctctagatc agggcaccta ttcgcaaaga tctacaagct	240
gaactagtaa gcatagcggg agaatatccc acatcattcg agaaggcctt cgtattagac	300
ctagtgggat cgacagaaaa gataagacgg agatagatgc tatgtttgga aggtagggga	360
tggaatagga tgcaacaggt attggcataa gcgatgcaat aggtgcatct agaaactagg	420
tgacagactg gccacagagg tgtatcctat gcaggtcgat gcgtgcgtta tcgcagggct	480
gctattgcgt ggtggtggct acaaaagttc tatgtggttt ccagtttcag aatattgggc	540
cattgtgatt gatggcgcat gaccgaatta tagcagtga ccccgcccag agtagtagtg	600
cagatgcgct ttgatgcttg gcgattcctc gggctaaata actccggttg gtctgtagaa	660
tgctgacgcg atgatccttc ggcattaatc gtagatcttg gggggggata agccgatcaa	720
agacacactg tagatcagct cttcgatgac tcttaccagc tttataataa cattcatctt	780
gaacgtcttt ttcgtccagt gtttaccttt cgtcctatct atccgtcata tccacagtgt	840
tattggcgat agagttatcg actttcctca tcgggatact ggccccctgct gccaaaggcc	900
ttatatgccg atcactttca cgggagcatg ataagggtta tgcttcttct gaatgccgaa	960
taaatacctt gttggaagcg tcgagatggt ccttgaatat tctctagctt gagtcttgga	1020
tacgaaacct gtttgagaaa taggtttcaa cgagttaaga agatatgagt tgatttcagt	1080
tggatcttag tcctggttgc tcgtaataga gcaatctaga tagcccaa at tgaatatgaa	1140
atttgatgga aatattcatt tcgatagaag caacgtgaaa tgtctagcag gacgaaaagt	1200
agatcaaggc tgttatgttc cccgaccaac ctaccttgat gtcagtctgc gagtctgtg	1260
cagtgaccca gaatgatgga ttgacttgga cattttctgt ctatgaagta ttatgaacat	1320
gaatatcggt tcctcattat ctatgttggc agcctaaagt tttaccatat agctagcaat	1380
cagtcaagta tctgcgtatg aagggttggt aagccaggac ggtatcagcg ttgaatattt	1440
aaagaatgat atgagataat caacattgac atgataaaag aaaaggggaa acaaattgtg	1500
catatagtaa agacttcagg tcgacccctc aatagacata tgcgaaccga aaaccaacag	1560
gatacaattt atagataagt ataactacag ttatctgtct gccgaacaaa tactcttttg	1620

tgaaacaaat gaagagtaca taagctacag ttcttcagta ggaacatcct ttacaataac 1680
 tccettgact tcttcagct tctcaatagc ctccaaagtc atcgggtctgc catcaaggca 1740
 cgtcagctct ggtgtagcat acagcagtgc cataacttacg gaggatagga agtgggagga 1800
 atcggttcgtg tctgcctcca aaaatcgaca ccagtgtcct ttttgacgat actgatatgg 1860
 tggttaagctt gggagtctat tgttgacgtt gcatacctta cttaagcacg gtttcattcc 1920
 tctgctgata gtctccaac ttctcgaagt cgtaaagcat ggcctatagt atcttattga 1980
 gaaatatgtc ttctcagaaa attatatctt gtttaccttt cggtccgcca tggctgctaa 2040
 aactgctggg aaattcaaaa ggcgagcaca agcagcaaga gtgatgggca caacgtgata 2100
 tgttgataaa agcatcagta togataagtt ccactcagaa acctgcag 2148

<210> 7
 <211> 1060
 <212> DNA
 <213> Humicola insolens

<220>
 <221> CDS
 <222> (10)..(924)

<220>
 <221> sig_peptide
 <222> (10)..(72)

<220>
 <221> mat_peptide
 <222> (73)..(924)

<400> 7
 ggatccaag atg cgt tcc tcc ccc ctc ctc ccg tcc gcc gtt gtg gcc gcc 51
 Met Arg Ser Ser Pro Leu Leu Pro Ser Ala Val Val Ala Ala
 -20 -15 -10
 ctg ccg gtg ttg gcc ctt gcc gct gat ggc agg tcc acc cgc tac tgg 99
 Leu Pro Val Leu Ala Leu Ala Ala Asp Gly Arg Ser Thr Arg Tyr Trp
 -5 -1 1 5
 gac tgc tgc aag cct tcg tgc ggc tgg gcc aag aag gct ccc gtg aac 147
 Asp Cys Cys Lys Pro Ser Cys Gly Trp Ala Lys Lys Ala Pro Val Asn
 10 15 20 25
 cag cct gtc ttt tcc tgc aac gcc aac ttc cag cgt atc acg gac ttc 195
 Gln Pro Val Phe Ser Cys Asn Ala Asn Phe Gln Arg Ile Thr Asp Phe
 30 35 40
 gac gcc aag tcc gcc tgc gag ccg ggc ggt gtc gcc tac tcg tgc gcc 243
 Asp Ala Lys Ser Gly Cys Glu Pro Gly Gly Val Ala Tyr Ser Cys Ala

45										50										55										
gac	cag	acc	cca	tgg	gct	gtg	aac	gac	gac	ttc	gcg	ctc	ggg	ttt	gct	291														
Asp	Gln	Thr	Pro	Trp	Ala	Val	Asn	Asp	Asp	Phe	Ala	Leu	Gly	Phe	Ala															
60				65				70																						
gcc	acc	tct	att	gcc	ggc	agc	aat	gag	gcg	ggc	tgg	tgc	tgc	gcc	tgc	339														
Ala	Thr	Ser	Ile	Ala	Gly	Ser	Asn	Glu	Ala	Gly	Trp	Cys	Cys	Ala	Cys															
75				80				85																						
tac	gag	ctc	acc	ttc	aca	tcc	ggg	cct	gtt	gct	ggc	aag	aag	atg	gtc	387														
Tyr	Glu	Leu	Thr	Phe	Thr	Ser	Gly	Pro	Val	Ala	Gly	Lys	Lys	Met	Val															
90					95				100				105																	
gtc	cag	tcc	acc	agc	act	ggc	ggg	gat	ctt	ggc	agc	aac	cac	ttc	gat	435														
Val	Gln	Ser	Thr	Ser	Thr	Gly	Gly	Asp	Leu	Gly	Ser	Asn	His	Phe	Asp															
				110				115				120																		
ctc	aac	atc	ccc	ggc	ggc	ggc	gtc	ggc	atc	ttc	gac	gga	tgc	act	ccc	483														
Leu	Asn	Ile	Pro	Gly	Gly	Gly	Val	Gly	Ile	Phe	Asp	Gly	Cys	Thr	Pro															
125				130				135																						
cag	ttc	ggc	ggg	ctg	ccc	ggc	cag	cgc	tac	ggc	ggc	atc	tgc	tcc	cgc	531														
Gln	Phe	Gly	Gly	Leu	Pro	Gly	Gln	Arg	Tyr	Gly	Gly	Ile	Ser	Ser	Arg															
140				145				150																						
aac	gag	tgc	gat	cgg	ttc	ccc	gac	gcc	ctc	aag	ccc	ggc	tgc	tac	tgg	579														
Asn	Glu	Cys	Asp	Arg	Phe	Pro	Asp	Ala	Leu	Lys	Pro	Gly	Cys	Tyr	Trp															
155				160				165																						
cgc	ttc	gac	tgg	ttc	aag	aac	gcc	gac	aat	ccg	agc	ttc	agc	ttc	cgt	627														
Arg	Phe	Asp	Trp	Phe	Lys	Asn	Ala	Asp	Asn	Pro	Ser	Phe	Ser	Phe	Arg															
170					175				180				185																	
cag	gtc	cag	tgc	cca	gcc	gag	ctc	gtc	gct	cgc	acc	gga	tgc	cgc	cgc	675														
Gln	Val	Gln	Cys	Pro	Ala	Glu	Leu	Val	Ala	Arg	Thr	Gly	Cys	Arg	Arg															
190				195				200																						
aac	gac	gac	ggc	aac	ttc	cct	gcc	gtc	cag	atc	ccc	tcc	agc	agc	acc	723														
Asn	Asp	Asp	Gly	Asn	Phe	Pro	Ala	Val	Gln	Ile	Pro	Ser	Ser	Ser	Thr															
205				210				215																						
agc	tct	ccg	gtc	aac	cag	cct	acc	agc	acc	agc	acc	acg	tcc	acc	tcc	771														
Ser	Ser	Pro	Val	Asn	Gln	Pro	Thr	Ser	Thr	Ser	Thr	Thr	Ser	Thr	Ser															
220				225				230																						
acc	acc	tgc	agc	ccg	cca	gtc	cag	cct	acg	act	ccc	agc	ggc	tgc	act	819														
Thr	Thr	Ser	Ser	Pro	Pro	Val	Gln	Pro	Thr	Thr	Pro	Ser	Gly	Cys	Thr															
235				240				245																						
gct	gag	agg	tgg	gct	cag	tgc	ggc	ggc	aat	ggc	tgg	agc	ggc	tgc	acc	867														
Ala	Glu	Arg	Trp	Ala	Gln	Cys	Gly	Gly	Asn	Gly	Trp	Ser	Gly	Cys	Thr															
250					255				260				265																	
acc	tgc	gtc	gct	ggc	agc	act	tgc	acg	aag	att	aat	gac	tgg	tac	cat	915														
Thr	Cys	Val	Ala	Gly	Ser	Thr	Cys	Thr	Lys	Ile	Asn	Asp	Trp	Tyr	His															

270

275

280

cag tgc ctg tagacgcagg gcagcttgag ggccttactg gtggccgcaa 964
Gln Cys Leu

cgaaatgaca ctcccaatca ctgtattagt tcttgatcat aatttcgtca tccctccagg 1024

gattgtcaca taaatgcaat gaggaacaat gagtac 1060

<210> 8

<211> 305

<212> PRT

<213> Humicola insolens

<400> 8

Met Arg Ser Ser Pro Leu Leu Pro Ser Ala Val Val Ala Ala Leu Pro
-20 -15 -10

Val Leu Ala Leu Ala Ala Asp Gly Arg Ser Thr Arg Tyr Trp Asp Cys
-5 -1 1 5 10

Cys Lys Pro Ser Cys Gly Trp Ala Lys Lys Ala Pro Val Asn Gln Pro
15 20 25

Val Phe Ser Cys Asn Ala Asn Phe Gln Arg Ile Thr Asp Phe Asp Ala
30 35 40

Lys Ser Gly Cys Glu Pro Gly Gly Val Ala Tyr Ser Cys Ala Asp Gln
45 50 55

Thr Pro Trp Ala Val Asn Asp Asp Phe Ala Leu Gly Phe Ala Ala Thr
60 65 70 75

Ser Ile Ala Gly Ser Asn Glu Ala Gly Trp Cys Cys Ala Cys Tyr Glu
80 85 90

Leu Thr Phe Thr Ser Gly Pro Val Ala Gly Lys Lys Met Val Val Gln
95 100 105

Ser Thr Ser Thr Gly Gly Asp Leu Gly Ser Asn His Phe Asp Leu Asn
110 115 120

Ile Pro Gly Gly Gly Val Gly Ile Phe Asp Gly Cys Thr Pro Gln Phe
125 130 135

Gly Gly Leu Pro Gly Gln Arg Tyr Gly Gly Ile Ser Ser Arg Asn Glu
140 145 150 155

Cys Asp Arg Phe Pro Asp Ala Leu Lys Pro Gly Cys Tyr Trp Arg Phe
160 165 170

Asp Trp Phe Lys Asn Ala Asp Asn Pro Ser Phe Ser Phe Arg Gln Val
175 180 185

Gln Cys Pro Ala Glu Leu Val Ala Arg Thr Gly Cys Arg Arg Asn Asp
190 195 200

Asp Gly Asn Phe Pro Ala Val Gln Ile Pro Ser Ser Ser Thr Ser Ser
205 210 215

Pro Val Asn Gln Pro Thr Ser Thr Ser Thr Thr Ser Thr Ser Thr Thr
220 225 230 235

Ser Ser Pro Pro Val Gln Pro Thr Thr Pro Ser Gly Cys Thr Ala Glu
240 245 250

Arg Trp Ala Gln Cys Gly Gly Asn Gly Trp Ser Gly Cys Thr Thr Cys
255 260 265

Val Ala Gly Ser Thr Cys Thr Lys Ile Asn Asp Trp Tyr His Gln Cys
270 275 280

Leu

<210> 9

<211> 876

<212> DNA

<213> Thermomyces lanuginosus

<400> 9

atgaggagct cccttggtgct gttcttttgc tctgcgtgga cggccttggc cagtcctatt 60

cgtcgagagg tctcgcagga tctgtttaac cagttcaatc tctttgcaca gtattctgca 120

gccgcatact gccgaaaaaa caatgatgcc ccagctggta caaacattac gtgcacggga 180

aatgcctgcc ccgaggtaga gaaggcgat gcaacgtttc tctactcggt tgaagactct 240

ggagtgggcg atgtcaccgg cttccttget ctcgacaaca cgaacaaatt gatcgtcttc 300
 tctttccgtg gctctcggtc catagagaac tggatcgga atcttaactt cgacttgaaa 360
 gaaataaatg acatttgctc cggctgcagg ggacatgacg gcttcacttc gtcttgagg 420
 tctgtagccg atacgttaag gcagaagggtg gaggatgctg tgagggagca tcccgactat 480
 cgcgtggtgt ttaccggaca tagcttgggt ggtgcattgg caactgttgc cggagcagac 540
 ctgctgggaa atgggtatga tategacgtg tttcatatg gcgcccccg agtcggaaac 600
 agggcttttg cagaattcct gaccgtacag accggcggaa cactctaccg cattaccac 660
 accaatgata ttgtccctag actcccgccg cgcgaattcg gttacagcca ttctagccca 720
 gagtactgga tcaaactctg aaccttctgc cccgtcaccg gaaacgatat cgtgaagata 780
 gaaggcatcg atgccaccgg cggcaataac cagcctaaca ttccggatat ccctgcgcac 840
 ctatggtact tcgggttaat tgggacatgt ctttag 876

<210> 10
 <211> 291
 <212> PRT
 <213> *Thermomyces lanuginosus*

<400> 10

Met Arg Ser Ser Leu Val Leu Phe Phe Val Ser Ala Trp Thr Ala Leu
1 5 10 15

Ala Ser Pro Ile Arg Arg Glu Val Ser Gln Asp Leu Phe Asn Gln Phe
20 25 30

Asn Leu Phe Ala Gln Tyr Ser Ala Ala Ala Tyr Cys Gly Lys Asn Asn
35 40 45

Asp Ala Pro Ala Gly Thr Asn Ile Thr Cys Thr Gly Asn Ala Cys Pro
50 55 60

Glu Val Glu Lys Ala Asp Ala Thr Phe Leu Tyr Ser Phe Glu Asp Ser
65 70 75 80

Gly Val Gly Asp Val Thr Gly Phe Leu Ala Leu Asp Asn Thr Asn Lys
85 90 95

Leu Ile Val Leu Ser Phe Arg Gly Ser Arg Ser Ile Glu Asn Trp Ile
100 105 110

Gly Asn Leu Asn Phe Asp Leu Lys Glu Ile Asn Asp Ile Cys Ser Gly
 115 120 125

Cys Arg Gly His Asp Gly Phe Thr Ser Ser Trp Arg Ser Val Ala Asp
 130 135 140

Thr Leu Arg Gln Lys Val Glu Asp Ala Val Arg Glu His Pro Asp Tyr
 145 150 155 160

Arg Val Val Phe Thr Gly His Ser Leu Gly Gly Ala Leu Ala Thr Val
 165 170 175

Ala Gly Ala Asp Leu Arg Gly Asn Gly Tyr Asp Ile Asp Val Phe Ser
 180 185 190

Tyr Gly Ala Pro Arg Val Gly Asn Arg Ala Phe Ala Glu Phe Leu Thr
 195 200 205

Val Gln Thr Gly Gly Thr Leu Tyr Arg Ile Thr His Thr Asn Asp Ile
 210 215 220

Val Pro Arg Leu Pro Pro Arg Glu Phe Gly Tyr Ser His Ser Ser Pro
 225 230 235 240

Glu Tyr Trp Ile Lys Ser Gly Thr Leu Val Pro Val Thr Arg Asn Asp
 245 250 255

Ile Val Lys Ile Glu Gly Ile Asp Ala Thr Gly Gly Asn Asn Gln Pro
 260 265 270

Asn Ile Pro Asp Ile Pro Ala His Leu Trp Tyr Phe Gly Leu Ile Gly
 275 280 285

Thr Cys Leu
 290

<210> 11
 <211> 42
 <212> DNA
 <213> Fusarium oxysporum

<400> 11

gcacaccatg gtcgctggat ccataccttg ttggaagcgt cg 42

<210> 12
<211> 56
<212> DNA
<213> *Fusarium oxysporum*

<400> 12
atcggagcat gcggtaccgt ttaaacgaat tcaggtaaac aagatataat tttctg 56

<210> 13
<211> 44
<212> DNA
<213> *Humicola insolens*

<400> 13
ctcttggata tctatctctt caccatgcgt tcctcccccc tcct 44

<210> 14
<211> 20
<212> DNA
<213> *Humicola insolens*

<400> 14
caatagaggt ggcagcaaaa 20

<210> 15
<211> 25
<212> DNA
<213> *Thermomyces lanuginosus*

<400> 15
atctatctct tcaccatgag gagct 25

<210> 16
<211> 21
<212> DNA
<213> *Thermomyces lanuginosus*

<400> 16
tagatagaga agtggtactc c 21